

What is claimed is:

1. A method for manufacturing an article comprising the steps of: a.)
5 coating a molding surface of a mold or a mold half with a coating effective
amount of a high molecular weight coating composition; b.) dispensing a
mixture comprising a hydrogel monomer, a silicone-containing hydrogel
monomer, or a combination thereof into the mold or mold half; and c.) curing
10 the monomer mixture and the coating composition using a dwell time of less
than about 5 minutes and under conditions suitable to form an article coated
with the coating composition.
2. The method of claim 1, wherein the article is a contact lens.
- 15 3. The method of claim 1 or 2, wherein the monomer mixture comprises
a hydrogel.
4. The method of claim 1 or 2, wherein the monomer mixture comprises
a silicone hydrogel monomer.
- 20 5. The method of claim 1, wherein the molecular weight of the coating
composition is greater than about 300 kD.
6. The method of claim 1, wherein the dwell time is less than about 45
25 seconds.
7. The method of claim 5, wherein the dwell time is less than about 45
seconds.
- 30 8. The method of claim 1, wherein the coating composition further
comprises a low boiling point solvent and a high boiling point solvent.

9. The method of claim 8, wherein the coating of the molding surface is carried out by spin coating.
- 5 10. The method of claim 9, wherein spin coating is carried out using at least about 2 μ l and no more than about 20 μ l of the coating composition.
11. The method of claim 10, further comprising applying, subsequent to the spin coating step, a pressurized air jet to an edge of the mold.
- 10 12. An article formed by the method of claim 1, 6, 7, or 9.
13. A contact lens formed by the method of claim 2.
- 15 14. A method for manufacturing an article comprising: a.) coating a molding surface of a mold or a mold half with a coating effective amount of a high molecular weight hydrophilic coating composition; b.) dispensing a mixture of a hydrogel monomer, silicone-containing hydrogel monomer, or combination thereof into the mold or mold half; and c.) curing the monomer
- 20 mixture and coating composition using a dwell time of less than about 5 minutes and under conditions suitable to form an article coated with the coating composition.
15. The method of claim 14, wherein the article is a contact lens.
- 25 16. The method of claim 15, wherein the monomer mixture comprises a hydrogel monomer.
17. The method of claim 15, wherein the monomer mixture comprises a
- 30 silicone hydrogel monomer.

18. The method of claim 14, wherein the dwell time is less than about 45 seconds.

5 19. The method of claim 17, wherein the silicone hydrogel monomer mixture comprises a reaction product of a silicone based macromer Group Transfer Polymerization product and a polymerizable mixture comprising Si₈₋₁₀ monomethacryloxy terminated polydimethyl siloxane, polydimethylsiloxane other than Si₈₋₁₀ monomethacryloxy terminated polydimethyl siloxane, and a
10 hydrophilic monomer.

20. The method of claim 19, wherein the silicone hydrogel monomer mixture comprises the macromer in an amount of about 15 to about 25 wt percent, the Si₈₋₁₀ monomethacryloxy terminated polydimethyl siloxane in an
15 amount of about 20 to about 30 wt percent; methacryloxypropyl tris(trimethyl siloxy) silane in an amount of about 15 to about 25 wt percent; N,N-dimethyl acrylamide in an amount of about 20 to about 30 wt percent; 2-hydroxy ethyl methacrylate in an amount of about 2 to about 7 wt percent; tetraethyleneglycol dimethacrylate in an amount of about 0 to about 5 wt
20 percent and poly(N-vinyl pyrrolidinone) in an amount of about 0 to about 5 weight percent.

21. The method of claim 14, 15, 16, 17, 18, 19, or 20 wherein the coating composition comprises poly(vinyl alcohol), polyethylene oxide, poly(2-
25 hydroxyethyl methacrylate), poly(acrylic acid), poly(methacrylic acid), poly(maleic acid), poly(itaconic acid), poly(acrylamide), poly(dimethylacrylamide), carboxymethylated polymers, polystyrene sulfonic acid, polysulfonate polymers, polysaccharides, glucose amino glycans, block or random copolymers thereof, or mixtures thereof.

22. The method of claim 21, wherein the coating composition comprises poly(2-hydroxyethyl methacrylate).

23. The method of claim 15, wherein the coating composition further comprises a low boiling point solvent and a high boiling point solvent.

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24. The method of claim 23, wherein the coating of the molding surface is carried out by spin coating.

25. The method of claim 24, wherein spin coating is carried out using at
10 least about 2 μ l and no more than about 20 μ l of the coating composition.

26. The method of claim 25, further comprising applying, subsequent to the spin coating step, a pressurized air jet to an edge of the mold.

15 27. An article formed by the method of claim 14.

28. A contact lens formed by the method of claim 15, 18, 19, or 20.

29. A contact lens formed by the method of claim 21.

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30. A contact lens formed by the method of claim 22.

31. A method for manufacturing contact lenses comprising: a.) coating a molding surface of a mold or a mold half with a coating effective amount of a
25 hydrophilic coating composition having a molecular weight of greater than about 300 kD; b.) dispensing a mixture comprising a hydrogel monomer, a silicone-containing hydrogel monomer, or a combination thereof into the mold or mold half; and c.) curing the monomer mixture and coating composition using a dwell time of less than about 45 seconds and under

conditions suitable to form a contact lens coated with the coating composition, wherein the formed lens exhibits physiological compatibility.

32. The method of claim 31, wherein the monomer mixture comprises
5 hydrogel monomer.

33. The method of claim 31, wherein the monomer mixture comprises silicone hydrogel monomer.

10 34. The method of claim 33, wherein the silicone hydrogel monomer mixture comprises a reaction product of a silicone based macromer Group Transfer Polymerization product and a polymerizable mixture comprising Si_{8-10} monomethacryloxy terminated polydimethyl siloxane, polydimethylsiloxane other than Si_{8-10} monomethacryloxy terminated polydimethyl siloxane, and a
15 hydrophilic monomer.

35. The method of claim 34, wherein the silicone hydrogel monomer mixture comprises the macromer an amount of about 15 to about 25 wt percent, the Si_{8-10} monomethacryloxy terminated polydimethyl siloxane in an
20 amount of about 20 to about 30 wt percent; methacryloxypropyl tris(trimethyl siloxy) silane in an amount of about 15 to about 25 wt percent; N,N-dimethyl acrylamide in an amount of about 20 to about 30 wt percent; 2-hydroxy ethyl methacrylate in an amount of about 2 to about 7 wt percent; tetraethyleneglycol dimethacrylate in an amount of about 0 to about 5 wt
25 percent and poly(N-vinyl pyrrolidinone) in an amount of about 0 to about 5 weight percent.

36. The method of claim 31, 32, 33, 34, or 35, wherein the coating composition comprises poly(vinyl alcohol), polyethylene oxide, poly(2-
30 hydroxyethyl methacrylate), poly(acrylic acid), poly(methacrylic acid),

poly(maleic acid), poly(itaconic acid), poly(acrylamide),
poly(dimethacrylamide), carboxymethylated polymers, polystyrene sulfonic
acid, polysulfonate polymers, polysaccharides, glucose amino glycans, block
or random copolymers thereof, or mixtures thereof.

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37. The method of claim 36, wherein the coating composition comprises
poly(2-hydroxyethyl methacrylate).

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38. The method of claim 36, wherein the coating composition further
comprises a low boiling point solvent and a high boiling point solvent.

39. The method of claim 38, wherein the coating of the molding surface is
carried out by spin coating.

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40. The method of claim 39, wherein spin coating is carried out using at
least about 2 μ l and no more than about 20 μ l of the coating composition.

41. The method of claim 40, further comprising applying, subsequent to
the spin coating step, a pressurized air jet to an edge of the mold.

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42. A contact lens formed by the method of claim 31, 32, 33, 34, or 35.

43. A contact lens formed by the method of claim 36.

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44. A contact lens formed by the method of claim 37.

45. A contact lens formed by the method of claim 38.

46. A contact lens formed by the method of claim 39.

47. The contact lens of claim 42, wherein the coating composition comprises a coating of a dry film thickness of not less than about 5 nm and not more than about 70 nm.

5 48. The contact lens of claim 43, wherein the coating composition comprises a coating of a dry film thickness of not less than about 5 nm and not more than about 70 nm.

49. The contact lens of claim 44, wherein the coating composition
10 comprises a coating of a dry film thickness of not less than about 5 nm and not more than about 70 nm.

50. The contact lens of claim 45, wherein the coating composition
15 comprises a coating of a dry film thickness of not less than about 5 nm and not more than about 70 nm.

51. The contact lens of claim 4, wherein the coating composition comprises a coating of a dry film thickness of not less than about 5 nm and not more than about 70 nm.